

Claims

What is claimed is:

1. A method of accessing call-related information associated with telephony services implemented in a telephony network having a plurality of telephony network nodes serving a plurality of service subscribers, comprising:
 - a) receiving from a subscriber terminal a request for call-related information;
 - b) converting the request for call-related information into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call-related information request;
 - c) transmitting the converted call-related information request to a telephony network node maintaining a log of call-related information for the requesting service subscriber;
 - d) receiving at least a part of the log of call-related information for the requesting service subscriber from the telephony network node maintaining the log of call-related information for the requesting service subscriber, to provide a received log of call-related information; and
 - e) transmitting the received log of call-related information to the subscriber terminal.
2. The method of claim 1, further comprising:
 - receiving from the subscriber terminal a request to activate a telephony service;
 - converting the request to activate the telephony service into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted service activation request; and
 - transmitting the converted service activation request to a telephony network node controlling telephony services for the requesting service subscriber.

3. The method of claim 1, further comprising:

receiving from the subscriber terminal a request to initiate a call to a directory number associated with the received log of call-related information;
converting the request to initiate the call into a format compatible the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call initiation request; and
transmitting the converted call initiation request to a telephony switch serving the requesting service subscriber.

4. The method of claim 1, further comprising:

sending a subscriber identification request for display at the subscriber terminal;
receiving a response to the subscriber identification request including subscriber authentication data; and
validating the subscriber authentication data.

5. The method of claim 4, further comprising:

converting at least a portion of the subscriber authentication data into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide converted subscriber authentication data;
transmitting a request for at least a part of a service profile for the requesting service subscriber to a network node maintaining a database of service profiles, wherein the transmitted request includes converted subscriber authentication data; and
receiving from the network node maintaining the database of service profiles, at least a part of the service profile for the requesting service subscriber, to provide received service profile information.

6. The method of claim 5, wherein the service profile for the requesting service subscriber includes privilege level information.

7. The method of claim 5, wherein validating the subscriber authentication data further comprises:
 - comparing the subscriber authentication data with the received service profile information; and
 - if the subscriber authentication data matches at least a part of the received service profile information, permit the requesting service subscriber to access the received log of call-related information.
8. The method of claim 7, wherein the subscriber authentication data comprises data sufficient to uniquely identify the requesting service subscriber.
9. The method of claim 7, wherein the subscriber authentication data comprises a private access key.
10. The method of claim 8, further comprising:
 - receiving from a subscriber terminal a request to activate a telephony service;
 - converting the request to activate a telephony service into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted service activation request; and
 - transmitting the converted service activation request to a telephony network node controlling telephony services for the requesting service subscriber.
11. The method of claim 10, further comprising:
 - receiving from the subscriber terminal a request to initiate a call to a directory number associated with the received log of call-related information;
 - converting the request to initiate the call into a format compatible the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call initiation request; and

transmitting the converted call initiation request to a telephony switch serving the requesting service subscriber.

12. The method of claim 11, wherein the request for call-related information is converted to a format compatible with communications protocols utilized by signaling points existing on a public switched telephone network to provide the converted call-related information request, and wherein the request to activate a telephony service is also converted to a format compatible with communications protocols utilized by signaling points existing on a public switched telephone network to provide the converted service activation request.
13. The method of claim 12, wherein the request for call-related information is converted to Common Channel Signaling System Number 7 (SS7) Transaction Capabilities Application Part (TCAP) non-call related (NCR) messages to provide the converted call-related information request, and wherein the request to activate a telephony service is also converted to Common Channel Signaling System Number 7 (SS7) Transaction Capabilities Application Part (TCAP) non-call related (NCR) messages to provide the converted service activation request.
14. The method of claim 13, wherein the log of call-related information is maintained in a call log service.
15. A telephony service information management system for accessing call-related information associated with telephony services implemented in a telephony network having a plurality of telephony network nodes serving a plurality of service subscribers, comprising:
 - a) a first interface disposed to communicate with a subscriber terminal;
 - b) a second interface disposed to communicate with the plurality of telephony network nodes;

- c) a control system, associated with the first interface and the second interface, adapted to:
 - i) receive from a subscriber terminal a request for call-related information;
 - ii) convert the request for call-related information into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call-related information request;
 - iii) transmit the converted call-related information request to a telephony network node maintaining a log of call-related information for the requesting service subscriber;
 - iv) receive at least a part of the log of call-related information for the requesting service subscriber from the telephony network node maintaining the log of call-related information for the requesting service subscriber, to provide a received log of call-related information; and
 - v) transmit the received log of call-related information to the subscriber terminal.
16. The telephony service information management system of claim 15, wherein the control system is further adapted to:
- receive from the subscriber terminal a request to activate a telephony service;
 - convert the request to activate the telephony service into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted service activation request; and
 - transmit the converted service activation request to a telephony network node controlling telephony services for the requesting service subscriber.
17. The telephony service information management system of claim 15, wherein the control system is further adapted to:

receive from the subscriber terminal a request to initiate a call to a directory number associated with the received log of call-related information;
convert the request to initiate the call into a format compatible the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call initiation request; and
transmit the converted call initiation request to a telephony switch serving the requesting service subscriber.

18. The telephony service information management system of claim 15, wherein the control system is further adapted to:

send a subscriber identification request for display at the subscriber terminal;
receive a response to the subscriber identification request including subscriber authentication data; and
validate the subscriber authentication data.

19. The telephony service information management system of claim 18, wherein the control system is further adapted to:

convert at least a portion of the subscriber authentication data into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide converted subscriber authentication data;

transmitting a request for at least a part of a service profile for the requesting service subscriber to a network node maintaining a database of service profiles, wherein the transmitted request includes converted subscriber authentication data; and

receive from the network node maintaining the database of service profiles, at least a part of the service profile for the requesting service subscriber, to provide received service profile information.

20. The telephony service information management system of claim 19, wherein the service profile for the requesting service subscriber includes privilege level information.

21. The telephony service information management system of claim 19, wherein validating the subscriber authentication data further comprises:
 - comparing the subscriber authentication data with the received service profile information; and
 - if the subscriber authentication data matches at least a part of the received service profile information, permit the requesting service subscriber to access the received log of call-related information.
22. The telephony service information management system of claim 21, wherein the subscriber authentication data comprises data sufficient to uniquely identify the requesting service subscriber.
23. The telephony service information management system of claim 21, wherein the subscriber authentication data comprises a private access key.
24. The telephony service information management system of claim 22, wherein the control system is further adapted to:
 - receive from a subscriber terminal a request to activate a telephony service;
 - convert the request to activate a telephony service into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted service activation request; and
 - transmit the converted service activation request to a telephony network node controlling telephony services for the requesting service subscriber.
25. The telephony service information management system of claim 24, wherein the control system is further adapted to:
 - receive from the subscriber terminal a request to initiate a call to a directory number associated with the received log of call-related information;

converting the request to initiate the call into a format compatible the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call initiation request; and

transmit the converted call initiation request to a telephony switch serving the requesting service subscriber.

26. The telephony service information management system of claim 25, wherein the request for call-related information is converted to a format compatible with communications protocols utilized by signaling points existing on a public switched telephone network to provide the converted call-related information request, and wherein the request to activate a telephony service is also converted to a format compatible with communications protocols utilized by signaling points existing on a public switched telephone network to provide the converted service activation request.
27. The telephony service information management system of claim 26, wherein the request for call-related information is converted to Common Channel Signaling System Number 7 (SS7) Transaction Capabilities Application Part (TCAP) non-call related (NCR) messages to provide the converted call-related information request, and wherein the request to activate a telephony service is also converted to Common Channel Signaling System Number 7 (SS7) Transaction Capabilities Application Part (TCAP) non-call related (NCR) messages to provide the converted service activation request.
28. The telephony service information management system of claim 21, wherein the log of call-related information is maintained in a call log service.
29. A telephony service information management system for accessing call-related information associated with telephony services implemented in a telephony network having a plurality of telephony network nodes serving a plurality of service subscribers, comprising:

- a) means for communicating with a subscriber terminal connected to a public data network;
- b) means for communicating with the plurality of telephony network nodes;
- c) means for controlling the means for communicating with the subscriber terminal connected to the public data network, and the means for communicating with the plurality of telephony network nodes, including:
 - i) means for receiving from the subscriber terminal a request for call-related information;
 - ii) means for converting the request for call-related information into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call-related information request;
 - iii) means for transmitting the converted call-related information request to a telephony network node maintaining a log of call-related information for the requesting service subscriber;
 - iv) means for receiving at least a part of the log of call-related information for the requesting service subscriber from the telephony network node maintaining the log of call-related information for the requesting service subscriber, to provide a received log of call-related information; and
 - v) means for transmitting the received log of call-related information to the subscriber terminal.

30. The telephony service information management system of claim 29, wherein the means for controlling further comprises:

means for sending a subscriber identification request for display at the subscriber terminal;

means for receiving a response to the subscriber identification request including subscriber authentication data; and

means for validating the subscriber authentication data.

31. The telephony service information management system of claim 30, wherein the means for controlling further comprises:

means for converting at least a portion of the subscriber authentication data into a format compatible with the plurality of telephony network nodes serving the plurality of service subscribers, to provide converted subscriber authentication data;

means for transmitting a request for at least a part of a service profile for the requesting service subscriber to a network node maintaining a database of service profiles, wherein the transmitted request includes converted subscriber authentication data; and

means for receiving from the network node maintaining the database of service profiles, at least a part of the service profile for the requesting service subscriber, to provide received service profile information.

32. The telephony service information management system of claim 31, wherein means for validating the subscriber authentication data further comprises:

means for comparing the subscriber authentication data with the received service profile information; and

if the subscriber authentication data matches at least a part of the received service profile information, permit the requesting service subscriber to access the received log of call-related information.

33. The telephony service information management system of claim 32, wherein the subscriber authentication data comprises data sufficient to uniquely identify the requesting service subscriber.

34. The telephony service information management system of claim 33, wherein the means for controlling further comprises:

means for receiving from a subscriber terminal a request to activate a telephony service;

means for converting the request to activate a telephony service into a format compatible with the plurality of telephony network nodes serving the

plurality of service subscribers, to provide a converted service activation request; and

means for transmitting the converted service activation request to a telephony network node controlling telephony services for the requesting service subscriber.

35. The telephony service information management system of claim 34, wherein the means for controlling further comprises:

means for receiving from the subscriber terminal a request to initiate a call to a directory number associated with the received log of call-related information;

means for converting the request to initiate the call into a format compatible the plurality of telephony network nodes serving the plurality of service subscribers, to provide a converted call initiation request; and

means for transmitting the converted call initiation request to a telephony switch serving the requesting service subscriber.

36. The telephony service information management system of claim 35, wherein the request for call-related information is converted to a format compatible with communications protocols utilized by signaling points existing on a public switched telephone network to provide the converted call-related information request, and wherein the request to activate a telephony service is also converted to a format compatible with communications protocols utilized by signaling points existing on a public switched telephone network to provide the converted service activation request.